

Heavy traffic volumes at signalized at-grade intersections on urban and suburban multilane divided highways may cause the traffic signal control system installed will not function efficiently which in turn will lead to congestions and excessive traffic delays. A favourable approach is to close such intersections except for left-turning movements only. This intersection closure is often coupled with provisions on midblock U-turns in the downstream to accommodate the right-turning traffic. A particular concern about a midblock U-turn is that it may result in safety and operational problems. This study is carried out to evaluate the merging gap of U-turning vehicles and to compare the reported gap with the gap values obtained from other researchers. The traffic delay of the U-turning vehicles was also evaluated. The data pertaining to the analysis of gap acceptance and rejection as well as the delay was abstracted from the video playbacks using X-Note Stopwatch application. The driver's merging gap was analyzed using Greenshield, Raff and Probit methods. The result of the analysis indicates that the critical gap for drivers at a midblock U-turn facility is in the range of 4.0 - 4.5 seconds, which is much lower than the values obtained from studies carried out for American traffic characteristics. However, the traffic delay of U-turning vehicles cannot be concluded in this study due to the weak relationship obtained from the plot of the U-turning delay against nearside traffic volumes. Such a finding suggests the need for thorough study to be carried out to evaluate the current practice of U-turn facility design and assessment methods since traffic operations at such facility is different from those at on-ramp facilities where the design is based on the American Highway Capacity Manual.